

Notice of Allowability

Application No.

09/586,884

Applicant(s)

KONNO ET AL.

Examiner

James A. Thompson

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 28 March 2006.
2. ☒ The allowed claim(s) is/are 48-52, 56, 60, 64 and 68.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

- a. In claim 60, line 7, **change** "values, and" to "values; and".
- b. In claim 68, line 9, **change** "level" to "level;".

DETAILED ACTION

Response to Arguments

2. Applicant's arguments, see page 12, filed 28 March 2006, with respect to the rejections of claims 1, 17, 34-47, 78-84 and 90-92 under 35 USC §103(a) have been fully considered and are persuasive. Since claims 1, 17, 34-47, 78-84 and 90-92 have all been cancelled, the rejections of claims 1, 17, 34-47, 78-84 and 90-92 under 35 USC §103(a) listed in items 2-8 of the previous office action, dated 19 December 2005 and mailed 29 December 2005, have been withdrawn.

There are some formal errors in the remaining claims, but since the formal errors are minor formatting errors, said errors have been obviated by the Examiner's Amendment set forth above. While every effort had been made to ensure the accuracy of the present specification and drawings, given the large number of drawings and the length of the present specification, Applicant is respectfully advised to personally check the present specification and drawings for any formal errors and check to ensure that all references to figures and figure elements are accurate.

Allowable Subject Matter

3. Claims 48-52, 56, 60, 64 and 68 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 48 recites a selection means for selecting one dot pattern based on gradation-value information of the pixel of the image data and the position information of the pixel, from a dot-pattern-table storage unit for storing X (N>X) dot patterns

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for X gradation values, and a dot pattern generation means for generating dot patterns corresponding to (N-X) predetermined gradation values. If a dot pattern table corresponding to the gradation value information is stored in a dot pattern table storage unit, the dot pattern selected by the selection means is recorded by the recording head. If a dot pattern table corresponding to the gradation value information is not stored in the dot pattern table storage unit, dot patterns corresponding to the predetermined gradation values generated by said dot pattern generation means are recorded by the recording head. Examiner has been unable to find prior art which teaches all of the above features, thus anticipating claim 48 or rendering claim 48 obvious to one of ordinary skill in the art at the time of the invention. Thus, claim 48 is deemed allowable.

Claims 49-51 are deemed allowable by virtue of their dependence from claim 48.

Claim 60 is a method claim which recites similar limitations as recited in claim 48. Claim 60 is deemed allowable for reasons similar to claim 48.

Claims 52 and 56 recite a dot pattern storage unit for storing X (N>X) dot patterns for X gradation values, and a dot pattern generation means for generating dot patterns corresponding to (N-X) predetermined gradation values. A first and second selection means for selecting the dot pattern from the dot pattern table are also recited. If a dot pattern table corresponding to the gradation value information is stored in the dot pattern table storage unit, the dot pattern selected by the second selection means is recorded by the recording head. If a dot pattern table corresponding to the gradation value information is not stored in the dot pattern table storage unit, dot

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patterns corresponding to the predetermined gradation values generated by said dot pattern generation means are recorded by the recording head. Examiner has been unable to find prior art which teaches all of the above features, thus anticipating claim 52 or rendering claim 52 obvious to one of ordinary skill in the art at the time of the invention. Thus, claim 52 is deemed allowable.

Claim 64 is a method claim which recites similar limitations as recited in claim 52. Claim 64 is deemed allowable for reasons similar to claim 52.

Claim 68 is a method claim which recites similar limitations as recited in claim 56. Claim 68 is deemed allowable for reasons similar to claim 56.

The closest prior art found by Examiner is Tanaka (US Patent 6,203,133 B1). However, Tanaka does not teach the recited features of selecting a dot pattern based on position information of the pixel. Furthermore, all of the dot patterns used are stored by the system, rather than generated in a case where the required dot pattern is not stored.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is 571-272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



31 May 2006

James A. Thompson
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THOMAS A. LEE
PRIMARY EXAMINER